Abstract

Background and purpose: Intubation is a common procedure that is used to save the lives of sickly patients. One of the important care of the tracheal tube inserted in the patient's trachea,is to control the cuffs pressure and maintain it within the normal range. The aim of this study was to determine the effect of changing the body position in cuff pressure of two types of simple and spiral tracheal tube in patients admitted to the Intensive Care Unit.

Methods: A blind one-way test plan was used to guide the study. 60 patients underwent mechanical ventilation in two groups (each of them was 30 patients).In one group the tracheal tube was used and in the other group the spiral tracheal tube was used.The cuff pressure was placed in a common position and the cuff pressure was measured 2 minutes later.Cuff pressure was entered into a researcher-made questionnaire and was analyzed using SPSS software.

Findings: The results showed that after fixing the cuff pressure in a given amount of 25 centimeters of water, all changes except the full sitting position, caused a significant change in the pressure of the simple and spiral tracheal tube (p=0.000). Also, intra-group analysis of cuff pressure in the two groups of simple and spiral tube trachea showed that different positions did not change the cuff pressure equally (p=0.000).Comparisons of cuff pressure variation in different positions showed that the cuff pressure of the spiral trachea is more resistant to changes in the patient's conditions (p=0.000).

Conclusion: from the findings of this study, it can be concluded that in most cases of mechanical ventilation, cuff pressure is excessively tolerable and may lead to irreparable complications, such as ischemia of the trachea.It can also be concluded that the resistance of the spiral tracheal tube is more than the simple trachea tube in more switching and in a patients who need to more switching,it is better to use a spiral tracheal tube.

Key words: simple tracheal tube, spiral tracheal tube, cuff pressure, body change position